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WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
MAR. 1, 1970

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P O Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MARCH 8, 1970

Issued by

KENNETH E. GRANT
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

A.J. WEBBER
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PORTLAND, OREGON

In Cooperation with

G. BURTON WOOD
DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

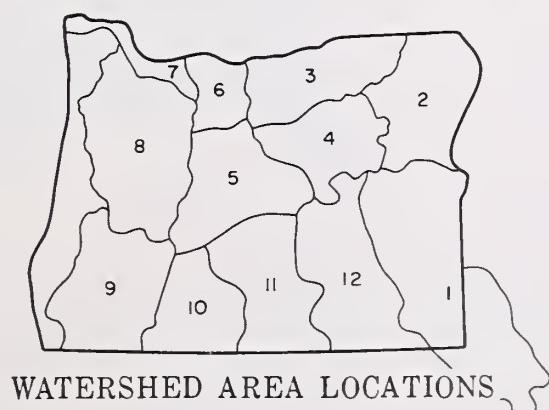
CHRIS L. WHEELER,
STATE ENGINEER
STATE OF OREGON

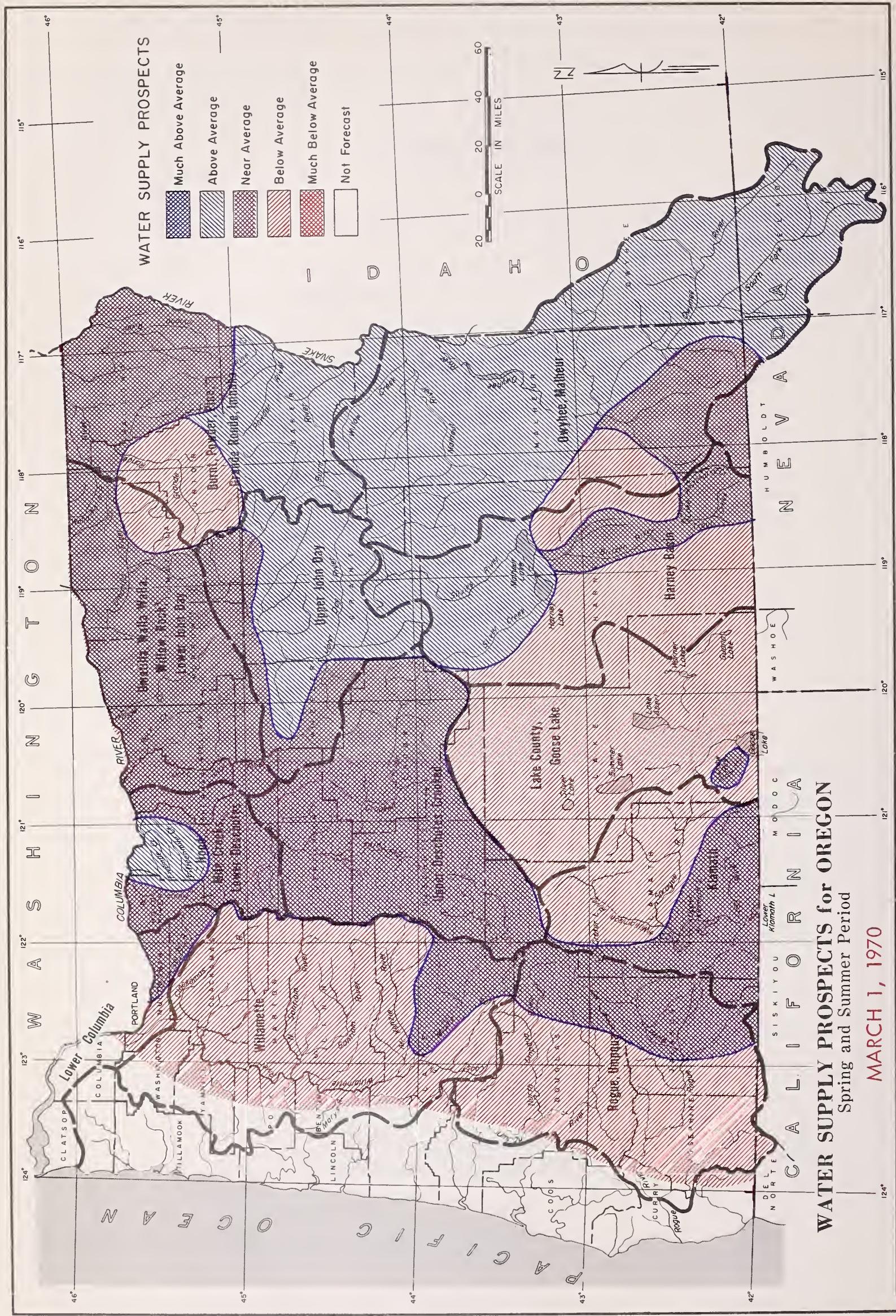
Report prepared by

TOMMY A. GEORGE, Snow Survey Supervisor
and
HOWARD M. VANCE, Assistant Snow Survey Supervisor
SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

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WATER SUPPLY OUTLOOK for OREGON

MARCH 1, 1970

Oregon water supply prospects range from below average west of the Cascades, and in south central Oregon, up to above average in much of the eastern one-third of the state. Reservoired supplies are excellent and will provide many water users with adequate water throughout the irrigation season. The mountain snow cover is generally average to above normal in the "high" country and poor in the lower elevations and foothills.

SNOW COVER

The mountain snowpack conditions vary considerably over the state. This is due mainly to the warm rains and temperatures experienced in January. The low and mid-elevation snow melted and ran off and has not built back up to normal amounts. The snow cover at higher elevations such as the crest of the Cascades and the Wallowas is average to above average. Depending mostly on elevation the snowpack ranges from 50 percent to 135 percent of normal.

SOIL MOISTURE

Mountain soils are near field capacity and moisture is 90 percent to 120 percent of normal. This condition has resulted from the heavy precipitation experienced up to February 1.

PRECIPITATION

Precipitation in February fell off considerably from previous months. It was 50 percent to 80 percent of normal over most of the state. Precipitation received during the winter period, November through February, has been 110 percent to 135 percent of normal.

RESERVOIR STORAGE

Reservoir storage is the real bright spot in the water supply picture. On March 1 twenty-six reservoirs contained 2,662,000 acre feet of water. This is 137 percent of what is usually stored on this date. It is due to the excellent runoff received from the above normal January rains.

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STREAMFLOW

Streamflow was high compared to normal in January from the heavy rains. It dropped off to near average amounts in February as the month brought sunny skies and little rainfall.

Prospective April-September streamflow for representative Oregon rivers is as follows:

	<u>Volume</u> <u>1000's A.F.</u>	<u>Percent</u> <u>1953-67 Avg.</u>
Owyhee net Inflow	360	120
Umatilla at Pendleton	115	74
Grande Ronde at La Grande	130	74
Upper Klamath Lake net Inflow	480	83
Rogue near Raygold	831	88
Willamette, Mid. Fk. of No. Fk.	700	84
Deschutes at Benham Falls	500	84
Malheur near Drewsey	99	138

This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, U. S. Weather Bureau and other cooperators.





WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS

OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

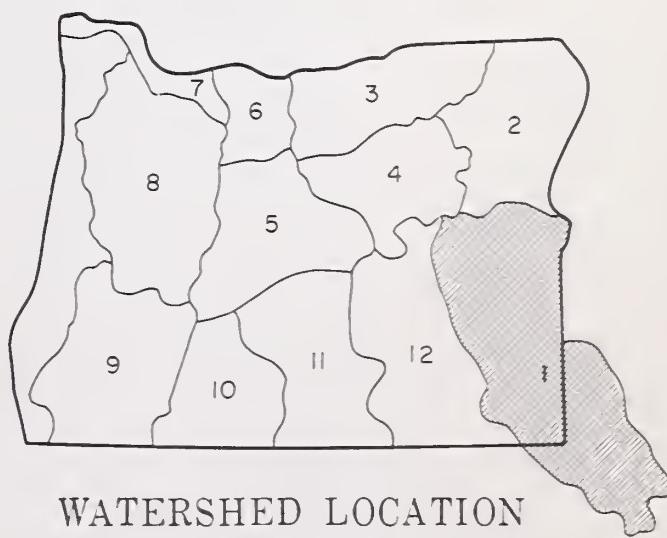
GENERAL OUTLOOK

ABOVE AVERAGE WATER SUPPLIES ARE FORECAST FOR MALHEUR COUNTY THIS SUMMER. RESERVOIRS ARE STORING EXCELLENT AMOUNTS FOR THIS TIME OF YEAR. STORED WATER IS ABOUT 150 PERCENT OF AVERAGE. PROSPECTIVE SUMMER STREAMFLOW RANGES FROM 110 TO 135 PERCENT OF NORMAL. PRECIPITATION DURING FEBRUARY WAS ONLY 47 PERCENT OF AVERAGE, HOWEVER, STREAMFLOW DURING THE MONTH WAS NEAR NORMAL DUE TO THE EXCELLENT RECHARGE RECEIVED IN JANUARY. THE SNOW COVER RANGES FROM 114 PERCENT ON THE UPPER Owyhee to 125 PERCENT OF AVERAGE ON JORDAN CREEK AND THE MALHEUR. MOUNTAIN SOILS CONTAIN 88 PERCENT OF AVERAGE MOISTURE IN THE NEVADA PORTION OF THE Owyhee, AND ARE AT FIELD CAPACITY IN ALL OTHER WATERSHEDS.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek	Excellent	Average
Bully Creek	Excellent	Excellent
Cow Creek	Average	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Excellent	Average
McDermit Creek	Average	Average
Oregon Canyon Creek	Average	Average
Owyhee Project	Excellent	Excellent
Succor Creek	Average	Average
Tennile Creek	Average	Average
Vale-Oregon Irrig. Dist.	Excellent	Average
Warmsprings Irrig. Dist.	Excellent	Average
Willow Creek (Reservoired)	Excellent	Average



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANDE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Jordan Creek above Lone Tree Creek	115	135	April-July	b	85 ^m
	116	136	April-Sept.	b	85 ^m
Malheur near Drewsey	125	134	March-July	b	93
	99	138	April-Sept.	b	72
Malheur, North Fork at Beulah ^d	90	134	March-July	b	67
	80	133	April-Sept.	b	60
Owyhee Reservoir net Inflow ^k	450	122	March-July	875	369
	360	120	April-Sept.	741	300

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000	May 26	May 24
	250	June 25	June 20

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Agency Valley	60.0	43.3	18.2	30.5
Antelope	55.0	24.7	27.5	11.8
Bully Creek	30.0	21.8	12.3	12.7
Owyhee	715.0	673.2	356.5	411.8
Warmsprings	191.0	144.0	29.4	94.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Jordan Creek	1	90	94
Malheur River	3	97	101
Owyhee River	2	90	88

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Jordan Creek	4	60	128
Malheur River	5	79	125
Owyhee River	5	50	114

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of
MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

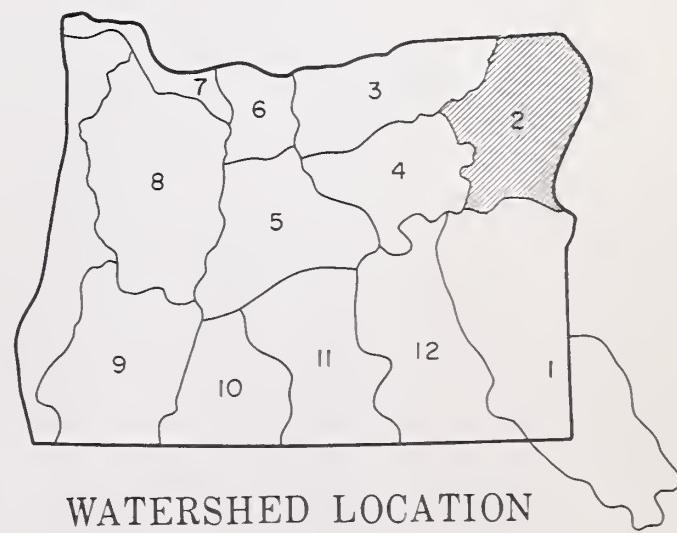
GENERAL OUTLOOK

ABOVE AVERAGE TO AVERAGE WATER SUPPLIES ARE THE OUTLOOK FOR NORTH-EAST OREGON THIS SUMMER. FEBRUARY RAINFALL WAS 77 PERCENT OF NORMAL. THE SNOWPACK WAS 125 AND 135 PERCENT OF NORMAL ON THE BURNT AND POWDER RIVER DRAINAGES RESPECTIVELY. MEDIUM AND LOW SNOW IS ABOUT ONE-HALF OF NORMAL AS ILLUSTRATED BY THE 48 PERCENT ON THE GRANDE RONDE DRAINAGE. SOILS ARE FILLED TO NEAR FIELD CAPACITY AND SHOULD PRODUCE GOOD RUNOFF FROM ANY SUBSEQUENT PRECIPITATION. RESERVOIRS ARE STORING 150 TO 160 PERCENT OF AVERAGE AMOUNTS OF WATER FOR MARCH 1. THE EXCEPTION IS WALLOWA LAKE WHICH CONTAINS 60 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope	Excellent	Average
Baker Valley	Excellent	Average
Big Creek	Excellent	Average
Clover Cr. (nr. N. Powder)	Average	Average
Cove	Excellent	Average
Durkee	Excellent	Average
Eagle Valley	Excellent	Average
Elgin	Excellent	Average
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Excellent	Average
Imnaha River	Average	Average
La Grande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Excellent	Average
Pine Valley	Excellent	Average
Powder River-Elk Creek	Excellent	Average
Summerville	Average	Average
Sumpter Valley	Excellent	Average
Union-Hot Lake	Excellent	Average
Unity	Excellent	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average <i>i</i>
Bear near Wallowa	71	108	April-Sept.	<i>b</i>	66
Burnt near Hereford ^d	54	126	March-July	<i>b</i>	43
Catherine near Union	44	126	April-Sept.	<i>b</i>	35
Eagle Creek abv. Skull Creek	75	117	April-Sept.	72	64
Grande Ronde at La Grande	200	119	April-July	179	168 ^m
Hurricane near Joseph	216	119	April-Sept.	192	182 ^m
Imnaha at Imnaha	152	73	March-July	259	207
Lostine near Lostine	130	74	April-Sept.	227	175
Powder near Baker	47	100	April-Sept.	<i>b</i>	47
Wallowa, East Fork near Joseph ^d	327	100	April-Sept.	<i>b</i>	327
	126	101	April-Sept.	<i>b</i>	125
	75	125	April-July	<i>b</i>	60
	78	126	April-Sept.	<i>b</i>	62
	12.7	100	March-Sept.	<i>b</i>	12.7
	11.7	98	April-Sept.	<i>b</i>	12.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Burnt, Powder	2	122	121
Grande Ronde, Catherine Cr., Imnaha River	3	110	121

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <i>i</i>
Thief Valley	17.4	17.4	<i>b</i>	--
Unity	25.2	16.1	13.0	11.9
Wallowa Lake	37.5	13.4	28.3	22.4
Phillips Lake	73.5	35.7	12.7	--

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <i>i</i>
Grande Ronde River abv. La Grande	4	35	48
Wallowa, Imnaha- Catherine Creek	6	96	110
Powder River	6	105	123
Burnt River	3	101	135

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

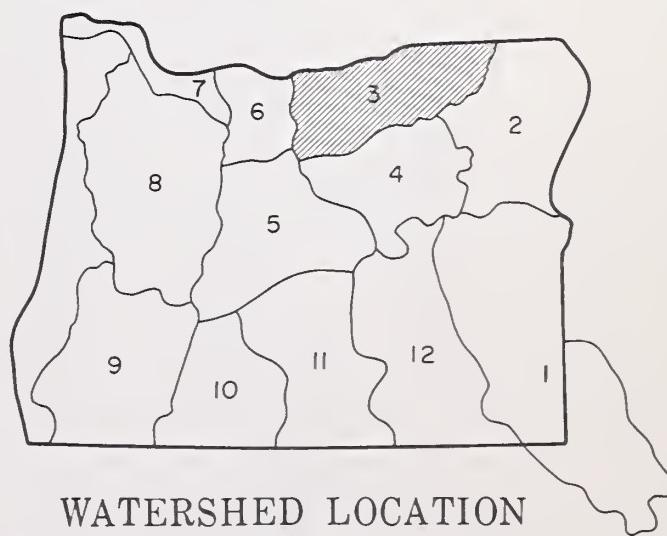
THE OUTLOOK FOR UMATILLA, MORROW AND GILLIAM COUNTIES IS FOR NEAR AVERAGE WATER SUPPLIES. THE MOUNTAIN SNOWPACK VARIES FROM 62 PERCENT OF NORMAL ON UPPER McKAY CREEK TO 116 PERCENT OF NORMAL ON THE WALLA WALLA RIVER DRAINAGE, AND NEAR AVERAGE AT THE HEAD OF BUTTER CREEK.

SUMMER STREAMFLOW WILL RANGE FROM 70 PERCENT ON McKAY CREEK AND THE UMATILLA RIVER UP TO 110 PERCENT ON THE WALLA WALLA RIVER. PRECIPITATION DURING THE MONTH WAS 100 PERCENT OF AVERAGE WITH A RESULTING NEAR NORMAL FLOW OF THE UMATILLA RIVER NEAR PENDLETON. COLD SPRINGS RESERVOIR HOLDS 88 PERCENT OF THE MARCH 1 AVERAGE SUPPLY WHILE McKAY RESERVOIR CONTAINS 186 PERCENT OF AVERAGE AMOUNTS. WATERSHED SOILS ARE AT FIELD CAPACITY AND ANY SPRING PRECIPITATION SHOULD PRODUCE GOOD RUNOFF.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fk.	Average	Average
Walla Walla River, So. Fk.	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, Little	Average	Average
Couse Creek	Average	Average
Dry Creek	Average	Average
Pine Creek	Average	Average
Umatilla River, Main	Average	Average
Wildhorse Creek	Average	Average
Umatilla R. (Cold Springs Reservoir)	Average	Average
Umatilla River (McKay Res.)	Average	Average
McKay Creek	Average	Fair
Birch Creek	Average	Average
Butter Creek	Average	Average
Willow Creek	Average	Average
Rhea Creek	Average	Average
Rock Creek (John Day tributary)	Average	Average



Report prepared by

T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Butter Creek near Pine City	11.0	89	March-July	b	12.4
McKay near Pilot Rock	30	75	March-July	b	40
	20	71	April-Sept.	b	28
Umatilla near Gibbon	90	91	March-Sept.	b	99
	77	96	April-Sept.	b	80
Umatilla at Pendleton	162	78	March-Sept.	285	208
	115	74	April-Sept.	225	155
Walla Walla, North Fork near Milton	22	110	March-Sept.	b	20
	17.5	109	April-Sept.	b	16.0
Walla Walla, South Fork near Milton	80	101	March-Sept.	b	79
	67	100	April-Sept.	b	67

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Umatilla, Walla Walla, McKay Creek	3	99	100

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cold Springs	50.0	35.6	41.1	40.3
McKay	73.8	66.2	40.6	35.5

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
McKay Creek	3	41	62
Umatilla River	3	44	87
Walla Walla River	2	84	116

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

MARCH 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

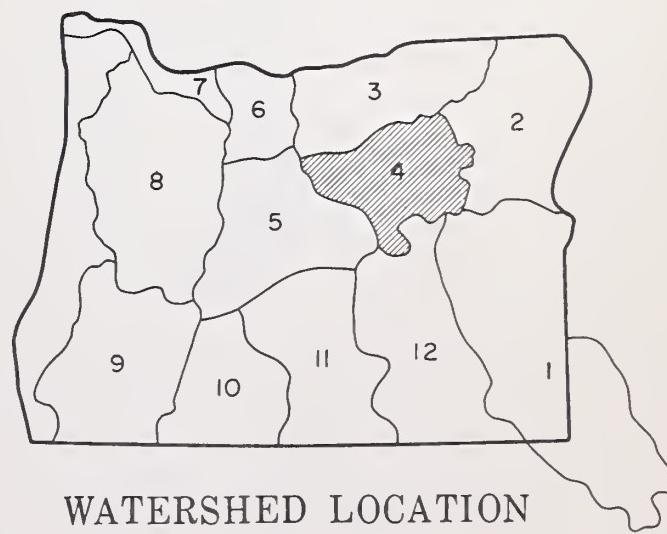
GENERAL OUTLOOK

EXCELLENT TO AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR THE UPPER JOHN DAY BASIN. THE MOUNTAIN SNOWPACK IS 113 TO 134 PERCENT OF NORMAL, WHICH, ALONG WITH WATERSHED SOILS THAT ARE SATURATED, WILL PRODUCE GOOD SUMMER STREAMFLOW. THE FEBRUARY PRECIPITATION WAS 65 PERCENT OF AVERAGE FOR THE BASIN. THE FLOW OF THE JOHN DAY RIVER AT SERVICE CREEK WAS 20 PERCENT ABOVE AVERAGE FOR THE MONTH AS A RESULT OF CONTINUED DRAINAGE FROM THE HEAVY JANUARY PRECIPITATION.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek	Average	Average
Beech Creek-Fox-Long Cr.	Average	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Average	Average
Cherry Creek	Fair	Fair
Indian-Pine Creeks	Excellent	Average
John Day River, Main Fork	Excellent	Average
John Day River, Mid. Fork	Excellent	Average
John Day River, N. Fork	Excellent	Average
John Day River, S. Fork	Excellent	Average
Monument-Kimberly	Excellent	Average
Strawberry Creek	Excellent	Average



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
John Day at Prairie City	60	118	March-July	b	51
	55	120	April-Sept.	b	46
John Day, Middle Fork at Ritter	157	116	March-July	160	135
	138	119	April-Sept.	137	116
Strawberry near Prairie City	9.4	119	March-July	5.3	7.9
	9.9	118	April-Sept.	5.7	8.4

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^m			Last Year	Average ⁱ
John Day abv. Dayville	7	105	111	John Day River, No. Fk. John Day abv. Dayville	6	88	113
John Day, North Fork	2	98	107		5	107	134

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

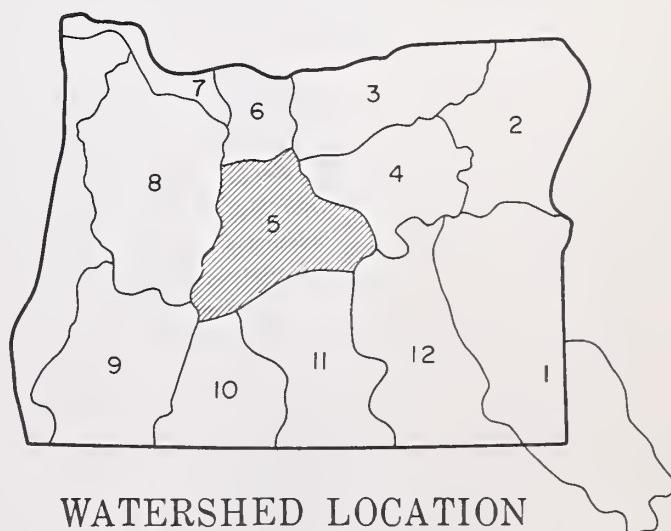
GENERAL OUTLOOK

SPRING AND SUMMER WATER SUPPLIES FOR THE UPPER DESCHUTES AND CROOKED RIVERS WILL BE AVERAGE TO FAIR FOR THE SUMMER SEASON. THE MOUNTAIN SNOWPACK RANGES FROM 77 PERCENT OF AVERAGE ON THE CROOKED TO 83 PERCENT ON THE UPPER DESCHUTES. MEDIUM AND LOW ELEVATION SNOW IS MUCH BELOW AVERAGE. PRECIPITATION DURING FEBRUARY WAS 52 PERCENT OF AVERAGE. THE DESCHUTES AT MOODY FLOWED 98 PERCENT OF AVERAGE DURING THE MONTH. STREAMFLOW FORECASTS FOR THE APRIL TO SEPTEMBER PERIOD RANGE FROM 77 PERCENT OF NORMAL ON THE OCHOCO RESERVOIR INFLOW TO 103 PERCENT ON THE CROOKED NEAR POST. WICKIUP AND CRANE PRAIRIE RESERVOIRS HOLD ABOUT 94 PERCENT OF THE AVERAGE MARCH 1 STORAGE AND CRESCENT LAKE CONTAINS ABOUT 83 PERCENT. OCHOCO AND PRINEVILLE RESERVOIRS HOLD 148 AND 122 PERCENT OF AVERAGE RESPECTIVELY.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creek	Fair	Fair
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Fair	Fair
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Fair	Fair
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrigation Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Crane Prairie Reservoir total Inflow	88	90	March-July	^b	98
	116	92	April-Sept.	^b	126
Crescent at Crescent Lake ^d	23	88	March-July	^b	26
	25	89	April-Sept.	^b	28
Crooked near Post above Prineville Reservoir	142	101	March-July	^b	140
	104	103	April-Sept.	^b	101
Deschutes at Benham Falls ^d	330	84	April-July	336	393
	500	84	April-Sept.	514	596
Deschutes below Snow Creek	64	88	March-Sept.	60	73
	60	91	April-Sept.	55	66
Deschutes, Little near Lapine ^d	78	80	March-July	88	98
	73	77	April-Sept.	84	95
Ochoco Reservoir net Inflow	23	77	March-July	^b	30
	16.0	70	April-Sept.	^b	23
Odell near Crescent	25	83	April-Sept.	27	30
Squaw near Sisters	50	98	April-Sept.	52	51
Tumalo near Bend ^d	48	98	April-Sept.	^b	49

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Deschutes at Bend	*		
Little Deschutes near La Pine	400 200	June 1 June 25	June 7 July 8
*Forecast issued April 1.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Crane Prairie	55.3	45.2	29.4	46.6
Crescent Lake	86.9	41.0	30.5	49.2
Ochoco	47.5	40.7	8.8	27.5
Prineville	153.0	119.7	95.5	97.4 ^m
Wickiup	200.0	164.5	137.9	178.3

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ⁱ
Crooked River, Upper Deschutes River	3	100	104

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Crooked, Ochoco	3	46	77
Deschutes abv. Wickiup	3	72	83
Little Deschutes	3	54	72
Tumalo & Squaw Creeks	3	69	89

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

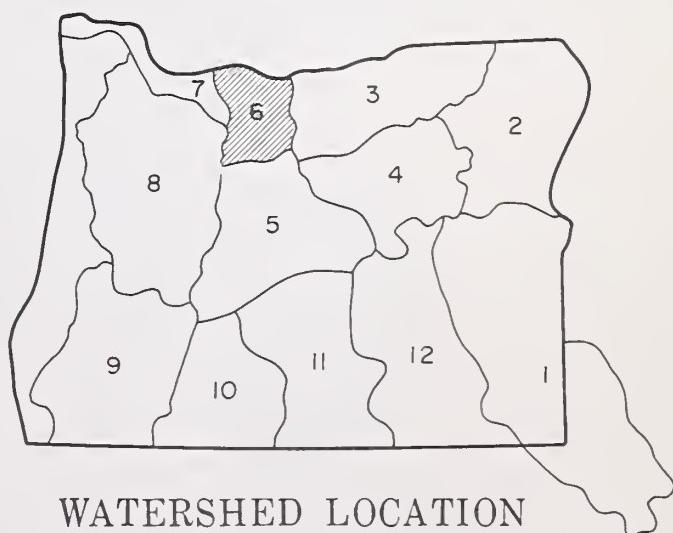
GENERAL OUTLOOK

WATER SUPPLIES WILL BE AVERAGE IN THE HOOD RIVER-LOWER DESCHUTES WATERSHEDS THIS SUMMER. THE SNOWPACK IS 92 TO 96 PERCENT ON THE HOOD AND WHITE RIVER DRAINAGES, AND 146 PERCENT OF AVERAGE ON THE MILE CREEKS. FEBRUARY STREAMFLOW WAS NEAR AVERAGE AND PRECIPITATION WAS 75 PERCENT OF AVERAGE. CLEAR LAKE (WASCO RESERVOIR) HELD ABOUT 75 PERCENT MORE THAN THE NORMAL AMOUNT OF WATER ON MARCH FIRST.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek)	Average	Average
Badger Creek	Average	Average
Dee Irrigation District	Average	Average
East Fork Irrig. Dist.	Average	Average
Farmers Irrigation Dist.	Average	Average
Hood River Irrig. Dist.	Average	Average
Juniper Flat	Average	Average
Middle Fork Irrig. Dist.	Average	Average
Mile Creeks	Excellent	Average
Mill Creek	Average	Average
Mount Hood Irrig. Dist.	Average	Average
Rock-Gate-Threemile Creeks	Average	Average
Tygh Creek	Average	Average
White River	Average	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Hood River near Hood River ^d	254	90	April-July	b	282
	308	92	April-Sept.	b	336
Hood, West Fork near Dee	130	93	April-July	198	140
	148	92	April-Sept.	220	161
White below Tygh Valley	117	91	April-July	b	128
	131	91	April-Sept.	b	144

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	*39	July 15-31	
*Average cfs forecast to flow for this two-week period.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Clear Lake (Wasco)	11.9	6.2	3.0	3.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Hood River, Mile Creeks	1	99	--

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Hood River	6	51	96
White River	3	54	92
Mile Creeks	3	44	146

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

OREGON STREAMS ORIGINATING AROUND MT. HOOD AND FLOWING INTO THE COLUMBIA WILL PROVIDE NEAR AVERAGE WATER SUPPLIES NEXT SUMMER. THE SNOW COVER IN THE UPPER COLUMBIA BASIN VARIES FROM 65 PERCENT IN CANADA, UP TO NEAR AVERAGE IN IDAHO, AND ABOVE AVERAGE IN EASTERN OREGON AND WESTERN WASHINGTON. SOIL MOISTURE IS GENERALLY GOOD FOR THIS TIME OF YEAR. FLOW OF THE COLUMBIA FROM THE DALLES DOWN-STREAM TO THE MOUTH WILL BE SLIGHTLY BELOW AVERAGE.

COLUMBIA RIVER BASIN



Report prepared by

T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <i>i</i>
Sandy River	2	58	91

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <i>i</i>
Columbia at The Dalles ^d	62,200 93,200	86 88	April-June April-Sept.	6 6	72,406 105,176

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR - SEPT	APR - JUNE	MAY - JUNE		
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

MARCH 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

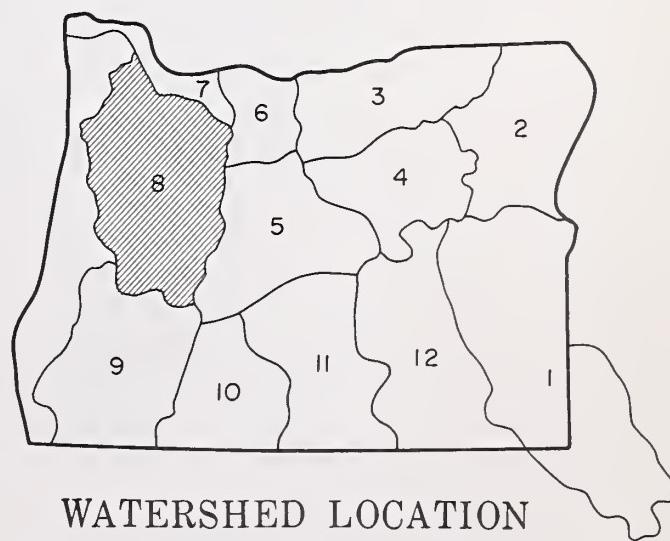
GENERAL OUTLOOK

WATER SUPPLIES WILL BE FAIR TO AVERAGE IN THE WILLAMETTE VALLEY THIS SUMMER. THE SNOWPACK RANGES FROM 54 PERCENT ON THE MCKENZIE RIVER TO 78 PERCENT ON THE CLACKAMAS RIVER. PRECIPITATION DURING FEBRUARY WAS 75 PERCENT OF AVERAGE. THE LOW AND MID-ELEVATION SNOWPACK DID NOT RECOVER FROM THE HEAVY MELT AND RUNOFF THAT OCCURRED DURING JANUARY. THE APRIL-SEPTEMBER FORECAST RANGES FROM 77 PERCENT OF NORMAL ON THE ROW RIVER TO 88 PERCENT OF AVERAGE ON THE CLACKAMAS. THE MULTIPURPOSE RESERVOIRS ARE HOLDING NEAR NORMAL AMOUNTS FOR MARCH 1.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya	Average	Fair
Clackamas	Average	Average
McKenzie	Fair	Fair
Molalla	Fair	Fair
Santiam, North	Fair	Fair
Santiam, South	Fair	Fair
Willamette, Coast Fork	Fair	Fair
Willamette, Middle Fork	Average	Fair



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year
Clackamas at Big Bottom	114	85	April-July	b
	140	84	April-Sept.	b
Clackamas at Estacada	596	86	April-July	b
	700	88	April-Sept.	b
Clackamas above Three Lynx	450	87	April-July	b
	540	88	April-Sept.	b
McKenzie at McKenzie Bridge	381	82	April-July	b
	500	81	April-Sept.	b
McKenzie near Vida	950	87	April-July	b
	1150	87	April-Sept.	b
Oak Grove Fork above Power Intake	106	85	April-July	b
	140	86	April-Sept.	b
Row near Dorena	80	75	April-July	b
	85	77	April-Sept.	b
Santiam, North at Mehama ^d	613	77	April-July	b
	694	77	April-Sept.	b
Santiam, South at Waterloo	489	82	April-July	b
	510	80	April-Sept.	b
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d	620	86	April-July	855
	700	84	April-Sept.	968
Willamette at Salem ^d	4075	87	April-July	b
	4570	88	April-Sept.	b

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Clackamas River	2	33	78
McKenzie River	3	30	54
Row River	2	28	59
Santiam River	4	31	59
Willamette, Mid. Fk.	5	45	63

RESERVOIR STORAGE (Thousand Ac. Ft.)

END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^j
Cottage Grove	30.0*	8.3	7.9	9.3
Cougar	155.2*	51.7	7.7	--
Detroit	299.9*	132.8	0.0	94.9
Dorena	70.5*	18.7	17.6	21.1
Fall Creek	115.0*	4.2	28.4	--
Fern Ridge	94.2*	36.4	36.4	33.4
Foster	30.0*	7.4	2.9	--
Green Peter	270.0*	109.2	12.8	--
Hills Creek	200.0*	95.4	0.0	63.3
Lookout Point	337.2*	128.4	8.1	116.9
Timothy Lake	61.7	59.1	44.2	47.8

*Multiple purpose
reservoir--space
reserved primarily
for flood runoff.

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

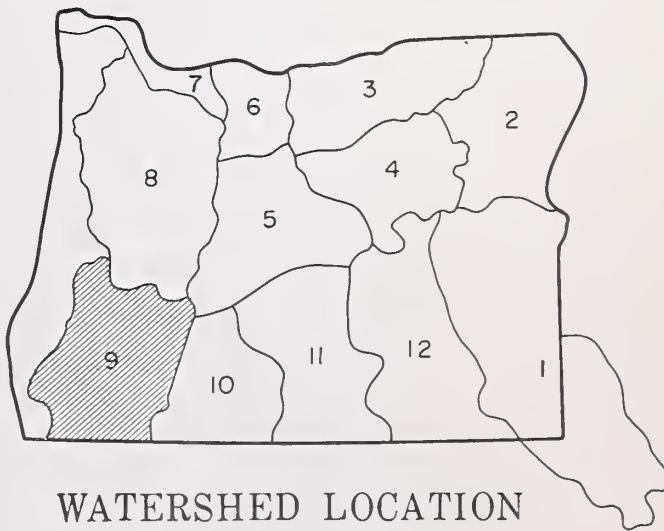
GENERAL OUTLOOK

SUMMER WATER SUPPLIES IN THE ROGUE AND UMPQUA BASINS WILL BE AVERAGE FOR THOSE USERS WITH STORED WATER AVAILABLE, AND ONLY FAIR FOR THOSE DEPENDENT ON DIRECT DIVERSION. RESERVOIRED WATER IS EXCELLENT WITH STORED SUPPLIES 150 PERCENT OF AVERAGE FOR MARCH 1 ALL SHOULD FILL. THE SNOW COVER RANGES FROM 45 PERCENT ON LOWER ELEVATION WATERSHEDS UP TO NEAR 80 PERCENT ON THOSE HEADING UP IN THE "HIGH" COUNTRY OF THE CASCADES AND SISKIYOUS. SOILS ARE SATURATED AND STREAMS SHOULD SHOW GOOD RESPONSE TO ANY RAINFALL RECEIVED BETWEEN NOW AND EARLY SUMMER. PRECIPITATION WAS 55 PERCENT DURING FEBRUARY BUT HAS BEEN 110 PERCENT FOR THE WINTER PERIOD, NOVEMBER THROUGH FEBRUARY. APRIL-SEPTEMBER STREAMFLOW WILL RANGE FROM 70 TO 90 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek	Fair	Fair
Applegate River, Big	Fair	Fair
Applegate River, Little	Fair	Fair
Ashland Creek	Average	Average
Butte Creek, Big	Fair	Fair
Butte Creek, Little	Fair	Fair
Cow Creek	Fair	Fair
Deer Creek	Fair	Fair
Elk Creek	Fair	Fair
Emigrant Creek (abv. Res.)	Fair	Fair
Evans Creek	Fair	Fair
Gold Hill Irrigation Dist.	Average	Fair
Grants Pass Irrig. Dist.	Average	Fair
Grave Creek	Fair	Fair
Illinois River, East Fork	Fair	Fair
Illinois River, West Fork	Fair	Fair
Jump-off-Joe Creek	Fair	Fair
Neil Creek	Average	Average
Red Blanket Creek	Average	Fair
Rogue River	Average	Fair
Sucker Creek	Fair	Fair
Table Rock Irrig. Dist.	Average	Fair
Thompson Creek	Fair	Fair
Wagner Creek	Average	Average
Williams Creek	Fair	Fair



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average ⁱ
Applegate near Copper	119	85	April-Sept.	b	140
Clearwater above Trap Creek ^d	67	92	April-Sept.	b	73
Fourmile Lake net Inflow ^d	4.0	83	March-Sept.	b	4.8
	3.5	85	April-Sept.	b	4.1
Hyatt Reservoir net Inflow ^d	3.3	63	April-Sept.	b	5.2
Illinois River near Kerby	271	83	March-July	b	325
	170	80	April-Sept.	b	211
Little Butte, N. Fk. at Fish Lk. nr. Lake Cr. ^d	10.0	69	April-Sept.	b	14.4
Little Butte, So. Fk. nr. Lake Creek	25	76	April-July	b	33
Rogue above Prospect	235	87	April-July	b	269
	294	90	April-Sept.	b	326
Rogue, South Fork near Prospect ^d	59	95	April-July	b	62
	70	95	April-Sept.	b	74
Rogue River below South Fork	515	90	April-July	b	570 ^h
	640	90	April-Sept.	b	708 ^h
Rogue at Raygold near Central Point	691	88	April-July	853	781
	831	88	April-Sept.	1003	941
Rogue at Grants Pass	811	86	April-Sept.		940
Umpqua, No. blw. Lemolo Res. nr Toketee Falls ^d	160	91	April-Sept.		176

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Rogue at Raygold	1200	July 31	Aug. 7
Little Butte Creek, South Fork	100	May 13	May 27

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Emigrant Lake	39.0	31.9	29.0	28.3*
Fish Lake	7.8	5.8	3.3	5.7
Fourmile Lake	16.1	11.2	5.7	9.9
Howard Prairie	60.0	56.1	21.4	26.1
Hyatt Prairie	16.1	14.8	8.8	10.7

*Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Applegate River	3	44	85
Bear Creek	1	0	0
Butte Creek	4	20	43
Illinois River	3	16	44
North Umpqua	3	30	45
Rogue River	6	50	78

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

**WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON**

as of

MARCH 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

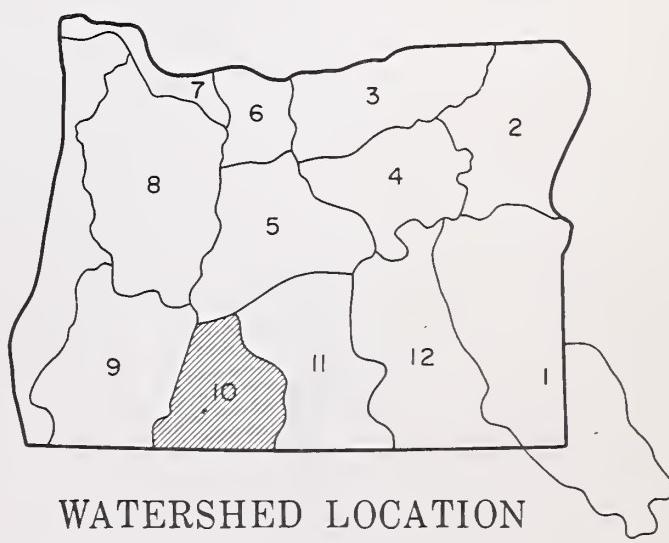
GENERAL OUTLOOK

FAIR TO EXCELLENT WATER SUPPLIES ARE FORECAST FOR KLAMATH COUNTY THIS SUMMER. RESERVOIRS CONTAIN 120 PERCENT OF AVERAGE AMOUNTS AND WILL PROVIDE USERS (WITH ACCESS) A PLENTIFUL SUPPLY. LOW AND MEDIAN ELEVATION SNOW COVER IS BELOW AVERAGE AND AS A RESULT STREAMFLOW THIS SUMMER WILL RANGE FROM 70 TO 80 PERCENT OF NORMAL. THIS STREAMFLOW WILL PROVIDE FAIR AMOUNTS OF WATER TO USERS DEPENDENT ON DIRECT DIVERSION. PRECIPITATION DURING FEBRUARY WAS 71 PERCENT OF AVERAGE. INFLOW TO UPPER KLAMATH LAKE WAS 115 PERCENT OF NORMAL DURING THE MONTH.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley	Average	Average
Lost River (Clear Lake)	Excellent	Average
Lost River (Gerber)	Excellent	Average
Lost River (Willow Res.)	Excellent	Average
Sprague River	Fair	Fair
Upper Klamath Lake	Excellent	Average
Williamson River	Fair	Fair



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Clear Lake Reservoir Inflow ^k	45	70	March-June	b	64
Gerber Reservoir Inflow ^k	22	69	March-June	b	32
Sprague near Chiloquin	233	78	March-July	b	299
	240	80	April-Sept.	b	296
Upper Klamath Lake net Inflow ^k	502	81	March-June	735	620
	480	83	April-Sept.	656	575
Williamson below Sprague River	363	78	March-June	b	464
	372	78	April-Sept.	b	475

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Upper Klamath	2	112	114

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Clear Lake	440.2	352.6	202.6	227.3
Gerber	94.0	81.7	31.1	48.6 ^m
Upper Klamath Lake	584.0	488.5	413.8	421.5

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Lost River	4	38	84
Sprague River	3	42	77
Upper Klamath River	8	39	65
Williamson River	3	46	67

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

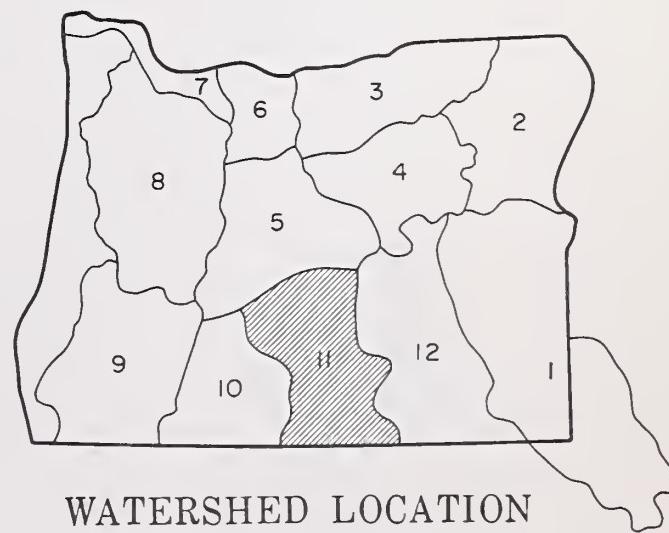
GENERAL OUTLOOK

WATER SUPPLIES IN LAKE COUNTY WILL RANGE FROM FAIR TO EXCELLENT DURING THE COMING SPRING AND SUMMER. BECAUSE OF THE RAINFALL AND WARM TEMPERATURES IN JANUARY, MOST OF THE LOWER ELEVATION SNOW COVER MELTED AND RAN OFF. FEBRUARY BROUGHT PRECIPITATION 61 PERCENT OF AVERAGE AND, AS A RESULT, THE SNOWPACK FAILED TO RECOVER THESE LOST AMOUNTS. IT NOW VARIES FROM 50 TO 80 PERCENT OF AVERAGE. STREAMFLOW IN THE COUNTY WILL RANGE FROM 65 TO 85 PERCENT NORMAL DURING THE APRIL-SEPTEMBER PERIOD. RESERVOIRS ARE FULL FROM THE JANUARY RUNOFF AND WILL PROVIDE EXCELLENT SUPPLIES TO USERS WITH ACCESS. WATERSHED SOILS ARE SATURATED AND IF GOOD SPRING RAINS ARE RECEIVED STREAMS COULD STILL PRODUCE AVERAGE AMOUNTS.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan	Average	Fair
Crooked Creek	Average	Average
Deep Creek	Fair	Fair
Dry Creek	Fair	Fair
East Side Goose Lake	Fair	Fair
Guano Lake	Fair	Fair
Honey Creek	Fair	Fair
Lakeview Water Users Assn.	Excellent	Average
Rock Creek (Hart Mtn.)	Fair	Fair
Silver-Buck Creeks	Fair	Fair
Summer Lake	Fair	Fair
Thomas Creek	Fair	Fair
Twentymile Creek	Fair	Fair
Warner Lakes	Fair	Fair



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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average ⁱ
Chewaucan near Paisley	80	88	March-July	b	91
Deep above Adel	58	82	March-July	b	71
Drews Reservoir net Inflow ^d	30	65	March-July	b	46
Honey Creek near Plush	15.0	83	March-July	b	18.0
Silver Creek near Silver Lake	13.0	62	March-July	b	21
Twentymile near Adel	15.0	62	March-July	b	24

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Chewaucan, Silver Creek, Drew Creek Honey, Deep, 20-mile Crs.	1 1	123 96	120 100

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cottonwood	8.7	8.7	1.3	3.2*
Drews	63.0	63.2	17.2	38.3
Thompson Valley	19.5	b	b	--

*Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Chewaucan River	3	42	77
Deep Creek	3	45	81
Drew Creek	3	22	47
Honey Creek	3	52	91
Silver Creek	3	12	24
Twenty Mile Creek	3	39	42

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

MARCH 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

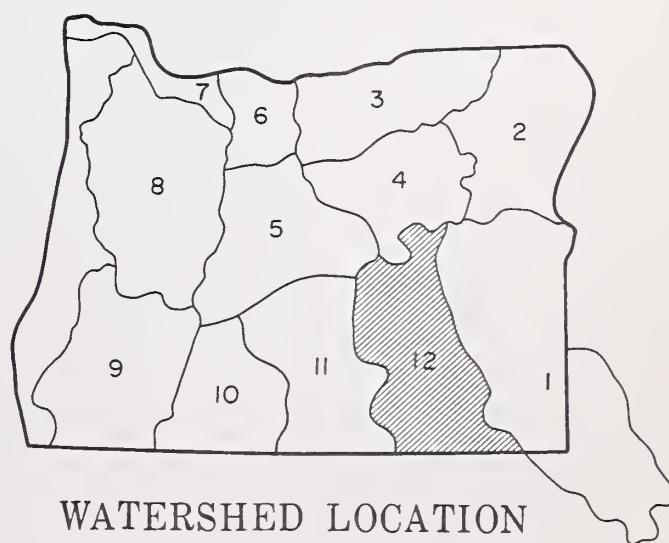
SPRING AND SUMMER WATER SUPPLIES IN THE HARNEY BASIN WILL RANGE FROM EXCELLENT TO FAIR. HIGH ELEVATION SNOW THROUGHOUT THE COUNTY IS EXCELLENT. MEDIAN ELEVATION SNOW IS NEAR AVERAGE WHILE LOWER ELEVATIONS IN THE DESERT AREAS ARE BARE. STREAMS IN THE NORTHERN PART OF THE COUNTY WILL PRODUCE EXCELLENT AMOUNTS OF WATER DURING THE APRIL-SEPTEMBER PERIOD. THOSE HEADING UP HIGH IN THE STEENS WILL PRODUCE AVERAGE AMOUNTS. ONLY FAIR SUPPLIES WILL COME FROM RIDDLE CREEK AND SIMILAR DESERT STREAMS.

AREA PRECIPITATION DURING FEBRUARY WAS 51 PERCENT OF NORMAL. SOILS ARE SATURATED AND WATERSHEDS SHOULD RESPOND WITH GOOD STREAMFLOW FROM ANY ENSUING RAINFALL.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Catlow Valley	Average	Fair
Cow Creek	Excellent	Average
Donner und Blitzen River	Average	Average
Mill-Coffeepot Creeks	Excellent	Average
Rattlesnake Creek	Excellent	Average
Silver Creek	Excellent	Average
Silvies River	Excellent	Excellent
Soldier-Prather Creek	Excellent	Average
Trout Creek	Average	Average
Whitehorse Creek	Average	Average



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Donner und Blitzen near Frenchglen	63	110	March-July	89	57
	60	109	April-Sept.	84	55
Silver near Riley	19.5	109	April-July	27	17.9
Silvies near Burns	124	123	March-July	b	101
Trout near Denio	100	120	April-Sept.	b	83
	6.7	87	March-July	b	7.7
	6.4	85	April-Sept.	b	7.5

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		THIS YEAR'S SNOW WATER AS PERCENT OF		
		Last Year	Average ^m	RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	
Silvies River, Silver Cr. Trout Cr., Donner und Blitzen River	3	96	105	Donner und Blitzen R. Silver Creek Silvies River Trout Creek	4 3 4 3	59 74 97 40
	2	91	108			112 112 133 92

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BASIC DATA SUPPLEMENT 1

MARCH 1, 1970

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

OWYHEE, MALHEUR WATERSHEDS

Antelope Ridge (Ida.)	3/3	18	6.3	17.4	4.2 ^h
Battle Creek ^e (Ida.)	2/25	1	0.4	7.0	3.1 ^m
Bear Creek (Nev.)	2/25	52	18.8	26.2	15.3 ^h
Big Bend (Nev.)	2/19	30	9.2	11.6	6.9
Blue Mountain Springs	2/27	52	19.8	17.0	13.7
Buck Pasture ^e	2/25	0	0.0	7.9	2.3 ^m
Buckskin, Lower (Nev.)	2/24	22	8.2	13.5	6.7
Buckskin, Upper (Nev.)	2/24	33	13.1	12.1	7.2 ^h
Bull Basin ^e (Ida.)	2/25	0	0.0	3.5	1.1 ^m
Bully Creek ^e	2/25	6	2.1	8.7	2.7 ^m
Call Meadow ^e	2/25	24	8.6	7.5	3.5 ^m
Columbia Basin ^e (Nev.)	2/26	20	6.6	15.4	- -
Cottonwood-Indian ^e	2/25	0	0.0	4.5	0.7 ^m
Crane Prairie	2/26	31	10.8	11.7	8.2
Crow Camp ^e	2/25	0	0.0	6.4	1.0 ^m
Disaster Peak (Nev.)	2/25	29	12.3	29.0	12.6
Eldorado Pass	2/27	1	0.7	7.9	2.7 ^h
Fawn Creek ^e (Nev.)	2/26	8	2.6	10.8	- -
Fish Creek	2/28	66	24.9	28.7	19.6 ^h
Flag Prairie ^e	2/25	20	7.0	10.7	3.4 ^m
Fox Creek (Nev.)	b			14.4	7.9 ^h
Fry Canyon (Nev.)	2/19	25	7.9	- -	6.0
Gold Creek (Nev.)	2/19	19	6.0	6.7	4.7
Granite Peak (Nev.)	2/24	49	18.3	24.3	10.7
Hyde Pasture ^e (Ida.)	2/25	12	4.4	13.4	4.2 ^m
Jack Creek, Lower (Nev.)	c				
Jack Creek, Upper ^e (Nev.)	2/26	18	5.9	11.2	8.0
Jack Peak (Nev.)	c				
Lake Creek R.S.	2/26	38	13.5	11.6	9.4
Lake Creek (New tangent)	2/26	38	13.6	- -	- -
Laurel Draw (Nev.)	2/25	21	6.4	11.0	6.2 ^h
Logan Valley ^e	2/25	27	9.7	10.7	6.3 ^m
Lookout Butte ^e	2/25	0	0.0	1.7	0.2 ^m
Loose Canyon ^e	2/25	1	0.4	8.7	3.1 ^m
Martin Creek (Nev.)	2/24	25	9.3	19.8	7.8
Merritt Mountain ^e (Nev.)	2/26	24	7.9	11.2	- -
Midas ^e (Nev.)	2/26	0	0.0	11.2	2.5 ^h
Mud Flat (Ida.)	3/3	18	6.2	10.4	4.7 ^h
Oregon Canyon ^e	2/25	12	4.4	10.7	5.2 ^m
Quinn Ridge ^e (Nev.)	2/25	0	0.0	4.2	2.3 ^m
Red Canyon ^e (Ida.)	2/25	21	7.8	10.4	4.8 ^m
Rock Spring	2/26	15	5.4	7.3	4.7
Rodeo Flat (Nev.)	2/19	18	6.2	- -	5.5
76 Creek (Nev.)	2/26	48	15.4	16.6	9.1 ^h
Silver City (Ida.)	3/2	49	15.5	22.9	12.5
Silvies	2/28	28	11.4	17.7	10.7 ^h
South Mountain (Ida.)	3/2	38	13.2	23.2	9.5
Stag Mountain ^e (Nev.)	2/26	6	1.9	11.2	- -
Stinking Water	3/1	0	0.0	8.2	2.7 ^h
Succor Creek ^e (Ida.)	2/25	12	4.4	8.7	5.0 ^m
Taylor Canyon (Nev.)	2/19	11	3.3	10.3	4.2
Toe Jam ^e (Nev.)	2/26	27	8.9	19.8	- -
Tremewan Ranch (Nev.)	2/19	0	0.0	4.4	1.1
Triangle ^e (Ida.)	2/25	0	0.0	1.7	0.6 ^m
Trout Creek ^e	2/25	18	6.7	13.7	6.3 ^m
"V" Lake ^e	2/25	12	4.9	15.1	3.6 ^m
Vaught Ranch ^e (Ida.)	2/25	8	3.0	7.0	- -
War Eagle ^e (Ida.)	2/25	83	29.1	28.1	- -

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

Aneroid Lake #1	2/26	83	29.8	37.2	31.2
Aneroid Lake #2	2/26	70	24.8	35.6	26.9
Anthony Lake	2/27	68	26.5	22.3	22.4
Bald Mountain ^e (Ore.)	2/25	59	22.4	11.9	19.9 ^m
Beaver Reservoir	2/26	21	6.5	13.5	9.2
Big Sheep ^e	2/25	58	20.3	30.9	21.2 ^m
Blue Mountain Summit	2/24	27	8.2	11.2	7.2
Bourne	2/24	47	18.5	16.8	13.7
County Line	2/27	5	1.9	6.3	5.4
Dooley Mountain	2/24	26	8.9	12.5	7.4
Ellertson Meadows	2/25	36	13.2	14.3	9.7
Eldorado Pass	2/27	1	0.7	7.9	2.7 ^h
Gold Center	2/26	40	15.3	14.5	11.0
Goodrich Lake	b				42.6
Intake House	2/25	34	11.3	13.8	- -
Little Alps	2/27	36	12.7	15.2	11.2 ^h
Little Antone	2/27	18	7.2	9.5	- -
Lucky Strike	2/26	32	10.7	13.6	10.7
Meacham	2/25	11	3.9	11.5	8.2
Mirror Lake ^e	2/25	80	68.4	52.9	56.5 ^m
Moss Springs	2/25	56	21.2	20.0	19.9
Power Plant	2/25	14	5.2	8.2	- -
Schneider Meadows	2/25	83	32.2	26.7	26.4
Schoolmarm	2/27	2	0.9	6.1	4.6
Standley ^e	2/25	89	32.0	24.1	24.3 ^m
Taylor Green	2/25	47	16.2	15.6	14.4 ^h
Tipton	2/24	36	12.2	12.3	8.9
Tollgate	2/25	65	26.2	26.7	21.5
TV Ridge	2/25	58	20.9	18.2	- -

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

Arbuckle Mountain	2/27	26	9.6	12.5	9.6
Battle Mountain Summit	2/25	T	T	4.6	1.8 ^m
Blue Mountain Camp	2/25	29	13.0	19.8	12.3 ^h
Emigrant Springs	2/25	0	0.0	10.4	4.7
Lucky Strike	2/26	32	10.7	13.6	10.7 ^h
Meacham	2/25	11	3.9	11.5	8.2
Tollgate	2/25	65	26.2	26.7	21.5
Walla Walla Diversion	3/1	0	0.0		
Weston Mountain	2/25	0	0.0	T	T ^m

UPPER JOHN DAY WATERSHEDS

Anthony Lake	2/27	68	26.5	22.3	22.4
Arbuckle Mountain	2/27	26	9.6	12.5	9.6
Battle Mountain Summit	2/25	T	T	4.6	1.8 ^m
Beech Creek Summit	2/25	3	1.5	6.9	4.4
Blue Mountain Springs	2/27	52	19.8	17.0	13.7
Blue Mountain Summit	2/24	27	8.2	11.2	7.2
Derr	2/26	21	7.5	12.5	8.3 ^h
East Fork Canyon ^e	b			10.9	9.0 ^m
Gold Center	2/26	40	15.3	14.5	11.0
Indian Creek Butte ^e	2/25	84	31.9	21.0	19.3 ^m
Izee Summit	2/24	25	8.8	7.2	6.8
Lucky Strike	2/26	32	10.7	13.6	10.7 ^h
Marks Creek	2/24	T	T	7.6	2.9
Ochoco Meadows	2/27	21	7.3	12.1	8.1
Olive Lake	3/5	62	22.3	20.8	16.5
Schoolmarm	2/27	2	0.9	6.1	4.6
Snow Mountain	2/25	38	13.7	14.0	11.0 ^h
Starr Ridge	2/24	17	6.1	7.4	4.9
Tipton	2/24	36	12.2	12.3	8.9
Williams Ranch	2/24	0	0.0	3.4	1.3 ^m

BASIC DATA SUPPLEMENT 1

MARCH 1, 1970

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

UPPER DESCHUTES, CROOKED WATERSHEDS

Black Pine Spring	3/2	14	1.7	9.6	3.4
Caldwell Ranch	2/27	12	4.9	13.6	11.5 ^h
Cascade Summit	2/27	45	17.6	32.7	24.0
Chemult	2/27	16	6.5	14.5	9.7
Deer Creek	2/27	36	12.0	21.0	—
Hogg Pass	2/27	70	28.4	46.7	33.1
Hungry Flat	3/1	8	1.0	10.8	5.3
Irish-Taylor	2/27	66	25.9	38.1	31.5 ^h
Marks Creek	2/24	T	T	7.6	2.9
Mowich	2/24	4	1.2	8.7	4.8 ^h
New Crescent Lake	2/24	28	9.7	19.0	12.9
New Dutchman Flat #2	3/1	100	41.1	48.6	43.3
Ochoco Meadows	2/27	21	7.3	12.1	8.1
Snow Mountain	2/25	38	13.7	14.0	11.0 ^h
Tamarack	2/24	10	3.5	6.7	4.8
Tangent	2/24	56	18.3	25.8	19.8
Three Creek Butte	3/2	35	7.7	17.2	9.4 ^h
Three Creek Meadow	3/2	57	15.3	23.9	16.0
Waldo Lake	2/25	48	18.1	32.2	25.5 ^h
Willamette Pass	2/26	76	29.2	41.6	33.7 ^h

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

Brooks Meadows	2/25	26	10.9	23.6	9.6 ^h
Clear Lake	2/24	22	7.8	23.0	8.2
Clear Lake (Experimental)	2/24	34	12.5	26.9	14.5 ^h
Cooper Spur	3/2	35	9.4	25.6	10.8 ^h
Cooper Spur (Alternate)	3/2	45	12.6	25.8	—
Greenpoint Reservoir	2/26	42	17.1	33.1	12.5
Knebal Springs	2/25	22	8.4	19.6	6.2 ^h
Parkdale	3/2	3	0.3	9.2	T
Phlox Point	2/24	104	45.3	69.0	49.5
Red Hill	2/26	70	29.2	57.8	31.0
Still Creek	2/24	42	16.6	37.0	18.4
Switchback	3/2	44	13.8	28.8	11.5 ^m
Tilly Jane	2/20	86	33.0	47.7	32.6
Ulrich Ranch Junction	2/25	19	6.8	16.2	2.1 ^m
Umbrella Falls	3/1	133	51.2	74.0	—
Upper Valley	3/2	22	4.6	18.8	—

WILLAMETTE WATERSHEDS

Cascade Summit	2/27	45	17.6	32.7	24.0
Champion	3/2	50	14.7	40.2	21.9
Clackamas Lake	2/27	22	8.6	20.5	9.9
Clear Lake	2/24	22	7.8	23.0	8.2
Clear Lake (Experimental)	2/24	34	12.5	26.9	14.5 ^h
Dead Horse Grade	2/26	0	0.0	28.3	15.2
Detroit (City)	2/27	0	0.0	8.0	0.5
Detroit Dam	2/27	0	0.0	5.2	0.5
Golden Curry Creek	3/2	10	1.0	15.0	4.7
Hogg Pass	2/27	70	28.4	46.7	33.1
Laurel Mountain	3/2	6	0.8	—	—
Layng Creek	3/2	0	0.0	T	T
Lost Creek Ranch	2/26	0	0.0	16.3	3.0 ^h
Lund Park	3/2	0	0.0	5.2	0.2
Marion Forks	2/27	8	2.4	26.0	11.1 ^h
Mary's Peak	2/27	0	0.0	39.3	9.0
Mary's Peak (Alternate)	2/27	0	0.0	—	—
McCredie Springs	2/27	0	0.0	4.8	0.2
McKenzie	2/26	64	27.5	50.6	35.1

(Continued)

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

WILLAMETTE WATERSHEDS (Continued)

McKenzie Bridge	2/26	0	0.0	6.6	0.2
Meridian Dam	2/27	0	0.0	0.0	0.0
Mill City	2/27	0	0.0	0.0	0.0
Oakridge	2/27	0	0.0	0.0	T
Peavine Ridge	2/26	27	9.6	30.0	14.1 ^h
Phlox Point	2/24	104	45.3	69.0	49.5
Railroad Overpass	2/27	0	0.0	8.4	2.4
Salt Creek Falls	2/27	6	1.8	21.7	12.8
Santiam Junction	2/27	21	8.2	35.9	18.8
Still Creek	2/24	42	16.6	37.0	18.4
Valsetz Summit	3/2	1	0.1	—	—
Vida	2/26	0	0.0	0.0	0.0
Waldo Lake	2/25	48	18.1	32.2	25.5 ^h
Weaver Creek	3/2	0	0.0	7.6	0.8
White Branch Slide	2/26	0	0.0	20.0	5.3
Whitewater Bridge	2/27	0	0.0	17.1	3.4
Willamette Pass	2/26	76	29.2	41.6	33.7 ^h

ROGUE, UMPQUA WATERSHEDS

Althouse	2/27	2	0.9	32.3	6.0
Annie Spring	2/25	100	36.8	47.0	36.3
Beaver Dam Creek	2/27	11	4.0	25.9	9.6 ^m
Big Red Mountain	2/23	68	26.7	49.0	26.6
Billie Creek Divide	2/27	29	12.0	33.2	18.4
Caliban	3/1	92	33.3	46.0	—
Champion	3/2	50	14.7	40.2	21.9
Cold Springs Camp	2/24	69	25.4	42.2	27.5 ^h
Deadwood Junction	2/27	T	T	19.4	8.7
Diamond-Crater Summit	2/27	61	23.7	37.1	30.5 ^h
Diamond-Crater Sum. (Alt.)	2/27	58	22.2	—	—
Diamond Lake	2/27	36	14.4	24.0	18.5
Fish Lake	2/27	10	4.4	24.1	11.7 ^h
Fourmile Lake	b			32.2	20.6
Grayback Peak	2/26	38	14.6	48.2	24.9
Howard Prairie	2/27	5	1.4	17.9	8.4
Hyatt Prairie Reservoir	2/27	T	T	19.4	7.4
King Mountain #1	2/25	2	0.8	22.3	—
King Mountain #2	2/25	0	0.0	20.8	—
King Mountain #3	2/25	0	0.0	9.6	—
King Mountain #4	2/25	0	0.0	0.0	—
King Mountain #5	2/25	0	0.0	0.0	—
King Mountain #6	2/25	0	0.0	0.0	—
Little Red Mountain	2/23	52	20.7	43.4	21.6
Mt. Ashland Switchback	3/1	101	30.3	40.0	—
North Umpqua	2/27	10	3.8	18.9	12.0
Page Mountain	2/26	0	0.0	18.7	4.3
Park Headquarters	3/1	135	51.8	59.5	47.5
Red Butte #1	2/23	3	1.1	30.2	10.8
Red Butte #2	2/23	2	0.5	22.5	7.2
Red Butte #3	2/23	0	0.0	13.8	7.2
Red Butte #4	2/23	0	0.0	9.4	2.4
Red Butte #5	2/23	0	0.0	5.9	T
Red Butte #6	2/23	0	0.0	2.6	0.0
Seven Lakes #2	3/1	91	34.9	47.4	32.1
Seven Mile	b			—	—
Silver Burn	2/27	1	0.2	24.1	11.3
Siskiyou Summit	2/26	T	T	21.5	5.7
Siskiyou Sum. (Alt. #2)	2/26	3	0.8	—	—
Ski Bowl Road	3/1	77	22.8	36.7	—
South Fork Canal	2/27	0	0.0	9.2	1.7
Trap Creek	2/27	T	T	18.6	10.0
Whaleback	2/27	47	18.8	39.2	27.5

BASIC DATA SUPPLEMENT 1

MARCH 1, 1970

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR		PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)
	Last Yr.	Ave.		

KLAMATH WATERSHEDS

Annie Spring	2/25	100	36.8	47.0	36.3
Beatty (PP&L)	2/27	0	0.0	1.8	0.1 ^m
Billie Creek Divide	2/27	29	12.0	33.2	18.4
Bly Mountain	2/20	6	1.4	13.0	6.3 ^h
Bly 101 Ranch (PP&L)	2/27	0	0.0	1.5	1.0 ^m
Chemult	2/27	16	6.5	14.5	9.7
Chiloquin (PP&L)	2/27	0	0.0	6.6	0.5
Cold Springs Camp	2/24	69	25.4	42.2	27.5 ^h
Crazyman Flat ^e	2/24	26	9.4	15.4	7.7 ^m
Crowder Flat ^e (Calif.)	2/24	0	0.0	8.3	2.0 ^m
Crystal (PP&L)	2/28	0	0.0	21.5	7.6
Diamond-Crater Summit	2/27	61	23.7	37.1	30.5 ^h
Diamond-Crater Sum. (Alt.)	2/27	58	22.2	- -	- -
Diamond Lake Junction (97)	2/27	5	2.4	11.3	6.2 ^h
Dog Hollow ^e	2/24	0	0.0	3.8	0.4 ^m
Finley Corrals ^e	2/24	42	15.1	22.4	12.6 ^m
Fort Klamath (PP&L)	2/28	0	0.0	8.2	3.1
Fourmile Lake		b		32.2	20.6 ^h
Gerber	3/2	5	1.6	6.4	1.8 ^h
Harriman (PP&L)	2/28	0	0.0	12.9	2.7 ^m
Hyatt Prairie Reservoir	2/27	T	T	19.4	7.4 ^h
Kirk (PP&L)		b		9.0	5.5 ^m
Lake of the Woods	2/26	11	3.4	16.1	10.7
Park Headquarters	3/1	135	51.8	59.5	47.5
Pelican Guard Station	2/24	0	0.0	10.7	3.1 ^h
Quartz Mountain	3/2	10	2.1	12.9	5.8
Quartz Mtn. (Extension)	3/2	11	2.4	13.9	- -
Quartz Mtn. (PP&L)		DISCONTINUED			
Seven Lakes #2	3/1	91	34.9	47.4	32.1 ^h
Seven Mile		b		- -	- -
State Line ^e (Calif.)	2/24	8	2.8	15.4	7.5 ^h
Strawberry	2/27	13	4.6	14.4	6.6 ^h
Summer Rim	2/27	46	16.0	22.2	13.8
Sun Mountain	2/25	51	18.3	31.0	20.8
Sycan Flat ^e	2/24	5	1.8	11.5	5.9 ^m
Taylor Butte	2/26	4	1.6	10.4	5.3 ^h

LAKE COUNTY, GOOSE LAKE WATERSHEDS

Adin Mountain (Calif.)	3/2	32	10.1	22.2	9.5
Bald Mountain (Nev.)	2/26	6	2.0	8.4	3.1
Bear Flat Meadow ^e	2/24	26	9.3	16.0	8.2 ^m
Camas Creek	2/26	19	6.6	16.6	9.5
Cedar Pass (Calif.)	2/27	35	13.0	21.0	12.3
Colvin Creek ^e	2/24	3	1.1	9.0	- -
Cox Flat ^e	2/24	4	1.4	14.7	6.5 ^m
Crowder Flat ^e (Calif.)	2/24	0	0.0	8.3	2.0 ^m
Dismal Swamp ^e (Calif.)	2/24	36	13.0	19.8	13.4 ^m

(Continued)

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR		PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)
	Last Yr.	Ave.		

LAKE COUNTY, GOOSE LAKE WATERSHEDS (Continued)

Finley Corrals ^e	2/24	42	15.1	22.4	12.6 ^m
Hart Mountain ^e	2/24	1	0.1	4.8	1.6 ^m
Little Bally Mtn. (Nev.)	2/24	4	1.4	6.6	2.1 ^m
Patton Meadows ^e	2/24	46	16.6	21.8	12.6
Quartz Mtn. (PP&L)		DISCONTINUED			
Quartz Mountain	3/2	10	2.1	12.9	5.8
Quartz Mtn. (Extension)	3/2	11	2.4	13.9	--
Sherman Valley ^e	2/24	26	9.3	16.3	10.0 ^m
Silver Creek	2/27	0	0.0	6.3	2.9
State Line ^e (Calif.)	2/24	8	2.8	15.4	7.5 ^m
Strawberry	2/27	13	4.6	14.4	6.6 ^h
Summer Rim	2/27	46	16.0	22.2	13.8
Sycan Flat ^e	2/24	5	1.8	11.5	5.9 ^m
Willow Creek ^e	2/24	2	0.7	7.2	3.2 ^m

HARNEY BASIN WATERSHEDS

Blue Mountain Springs	2/27	52	19.8	17.0	13.7
Buck Pasture ^e	2/25	0	0.0	7.9	2.3 ^m
Buckskin Lake ^e	2/25	0	0.0	2.3	0.2 ^m
Call Meadows ^e	2/25	24	8.6	7.5	3.5 ^m
Crow Camp ^e	2/25	0	0.0	6.4	1.0 ^m
Delintment Lake	2/25	23	8.0	9.0	6.5 ^h
Denio Creek ^e	2/25	0	0.0	3.0	0.5 ^m
Disaster Peak (Nev.)	2/25	29	12.3	29.0	12.6
Emigrant Butte	2/25	8	3.2	7.4	4.1 ^h
Fish Creek	2/28	66	24.9	28.7	19.6 ^h
Hart Mountain ^e	2/24	1	0.1	4.8	1.6 ^m
Idlewild Camp	2/26	16	5.3	8.5	4.5
Izee Summit	2/24	25	8.8	7.2	6.8
Lake Creek R.S.	2/26	38	13.5	11.6	9.4
Lake Cr. (New Tangent)	2/26	38	13.6	--	--
Oregon Canyon ^e	2/25	12	4.4	10.7	5.2 ^m
Rock Spring	2/26	15	5.4	7.3	4.7
Silvies	2/28	28	11.4	17.7	10.7 ^h
Snow Mountain	2/25	38	13.7	14.0	11.0 ^h
Starr Ridge	2/24	17	6.1	7.4	4.9
Stinking Water	3/1	0	0.0	8.2	2.7 ^h
Trout Creek ^e	2/25	18	6.7	13.7	6.3 ^m
"V" Lake ^e	2/25	12	4.9	15.1	3.6 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BASIC DATA SUPPLEMENT 2

MARCH 1, 1970

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average m
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	2/25	10.9	11.9	11.4
Big Bend (Nev.)	6700	48	16.7	2/19	12.0	--	15.1
Blue Mountain Spring	5900	42	16.9	2/27	11.1	10.6	10.1
Crane Prairie	5375	48	18.2	2/26	15.5	17.4	15.9
Folly Farm	4450	30	12.5	b			
Jack Creek, Lower (Nev.)	6800	48	8.6	c			
Jordan Valley	4390	48	19.3	3/2	14.8	16.5	15.7
Mud Flat (Ida.)	5500	48	12.8	3/3	14.4	14.3	11.4
Rodeo Flat (Nev.)	6800	42	11.0	2/19	4.0	--	--
Stinking Water Summit (DISCONTINUED)							
Taylor Canyon (Nev.)	6200	48	15.1	2/19	12.7	--	13.3
Triangle (Ida.)	5150	48	16.6	c			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	2/24	12.4	11.2	10.8
Dooley Mountain	5430	36	9.2	2/24	5.4	3.4	3.9
Emigrant Springs	3925	48	22.3	2/25	22.2	21.4	19.4
Ladd Summit	3730	48	18.9	2/27	14.0	10.1	10.5
Moss Springs	5850	36	25.8	2/25	14.6	14.5	--
Tollgate	5070	48	23.6	2/25	17.1	17.6	20.1
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Athena-Weston (DISCONTINUED)							
Battle Mountain Summit	4340	48	13.8	2/25	13.0	13.7	13.0
Emigrant Springs	3925	48	22.3	2/25	22.2	21.4	19.4
Tollgate	5070	48	23.6	2/25	17.1	17.6	20.1
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/25	13.0	13.7	13.0
Beech Creek	4800	48	21.3	2/25	17.0	13.9	13.5
Blue Mountain Spring	5900	42	16.9	2/27	11.1	10.6	10.1
Blue Mountain Summit	5100	36	16.8	2/24	12.4	11.2	10.8
Derr	5670	24	9.0	2/26	8.6	8.9	8.2
Marks Creek	4540	36	14.1	2/24	12.3	11.9	11.3
Snow Mountain	6300	48	16.7	2/25	13.6	13.6	13.8
Starr Ridge	5150	36	10.6	2/24	10.6	10.6	9.6
Williams Ranch	4500	42	17.9	2/24	17.4	17.7	17.1
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	2/26	8.6	8.9	8.2
Marks Creek	4540	36	14.1	2/24	12.3	11.9	11.3
Snow Mountain	6300	48	16.7	2/25	13.6	13.6	13.8
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	3/2	14.2	14.3	--
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	2/20	12.3	11.8	11.3

BASIC DATA SUPPLEMENT 2

MARCH 1, 1970

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average ^m
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	2/26	12.4	12.9	12.4
Quartz Mountain	5230	48	15.3	3/2	10.1	8.2	8.4
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	2/27	11.1	10.6	10.1
Fish Creek	7900	48	15.0	2/28	11.0	- -	10.1
Folly Farm	4450	30	12.5	b	- -	- -	- -
Silvies	6900	48	16.4	2/28	13.8	15.2	12.9
Snow Mountain	6300	48	16.7	2/25	13.6	13.6	13.8
Starr Ridge	5150	36	10.6	2/24	10.6	10.6	9.6
Stinking Water	(DISCONTINUED)		6.6	2/26	6.2	6.2	5.2
Willow-Bald	5000	24					

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BASIC DATA SUPPLEMENT 3

MARCH 1, 1970

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average
Allison Work Center (Harney County)	5320	1/28 to 2/26	1.00		
Althouse (Josephine County)	4530	11/13 to 2/26	30.04		
Anthony Lake (Baker County)	7150	1/23 to 2/20	6.65		
Arbuckle Mountain (Morrow County)	5400	1/29 to 2/27	2.65		
Big Red Mountain (Jackson County)	6240	10/14 to 2/26	28.50		
Brooks Meadow (Hood River County)	4320	10/15 to 2/25	24.70		
Camas Creek (Lake County)	5825	1/30 to 2/26	2.20		
County Line (Umatilla County)	4800	1/28 to 2/27	0.60		
Derr G. S. (Wheeler County)	5800	10/28 to 2/28	14.65		
Deer Creek (Deschutes County)	4554	1/29 to 2/27	2.15		
Dooley Mountain (Baker County)	5200	1/18 to 2/20	3.50		
Granite Mountain (Grant County)	5900	1/17 to 2/26	7.60		
Park Headquarters (Klamath County)	6450	2/1 to 2/28	3.99		
Quartz Mountain Summit (Lake County)	5530	1/29 to 2/28	2.83		
Silver Creek (Lake County)	4900	1/30 to 2/27	1.22		
Strawberry (Lake County)	5760	1/30 to 2/27	0.70		
Summer Rim (Lake County)	7200	10/23 to 2/27	8.10		
Taylor Butte (Klamath County)	5040	1/27 to 2/27	0.98		
Taylor Green (Union County)	5800	1/29 to 2/25	4.15		



NAME	LOCATION SEC TWP RGC	ELEV.	NUMBER	NAME	LOCATION SEC TWP RGC	ELEV.	NUMBER	NAME	LOCATION SEC TWP RGC	ELEV.	NUMBER	NAME	LOCATION SEC TWP RGC	ELEV.	
OWYHEE, MALHEUR ATERSHEDS (1)															
Owyhee River				Midas	(Nev) 18 39N 46E	7200	18E20	Eldorado Pass	20 14S 38E	4600	18E23	Little Alps			
Littleelope Ridge	{ Is) 20 8S 1E	5900	16G7MP	Mud Flat	(Ida) 34 9S 2W	5500	18E26a	Flag Prairie	32 16S 36E	4750	18E30	Little Antone			
Fattice Creek	{ Is) 10 11S 1E	5700	17G5a	Oregon Canyon	9 40S 40E	6950	18E18	Lake Creek	10 16S 33½E	5120	18E28	Power Plant			
Big Creek	{ v) 31 46N 58E	7800	17H6a	Quinn Ridge	(Nev) 9 47N 41E	6300	18E22a	Logan Valley	13 16S 33½E	5100	17D7P	Taylor Green			
Big Creek	{ v) 30 45N 56E	6700	15H6MP	Rodeo Flat	(Nev) 36 43N 53E	6800	18E32p*	Rock Spring	23 18S 32E	5100					
Big Creek	{ v) 4 38S 42E	5290	16F3AP	Silver City	(Ida) 6 5S 3W	6400	18F4P	S. Fk. Willow Cr.	2 16S 37E	5500					
Big Creek	{ v) 4 38S 42E	5290	18G1MPA	Silvies	35 32S 32E	6900		Stinking Water	33 21S 34E	4800	17D8	Schneider Meadow			
Big Creek	{ v) 25 45N 39E	6700	16G1P	South Mountain No. 2	(Ida) 10 6S 5W	6340									
Beckstein, Lower	{ v) 11 45N 39E	7200	15H19a	Stag Mountain	(Nev) 32 41N 58E	7800									
Beckstein, Upper	{ v) 12 45S 5W	5600	16F6a	Succor Creek	(Ida) 25 3S 5W	6100									
Big Basin	{ Is) 31 44N 53E	6650	15H4MP	Taylor Canyon	(Nev) 35 39N 53E	6200									
Columbia Basin	{ v) 8 47N 34E	6500	16H7a	Toe Jam	(Nev) 29 40N 50E	7700	18E14	Barney Creek	16 14S 36E	5950	17D1	Aneroid Lake No.			
Glacier Peak	{ v) 2 45N 52E	7000	15H8	Tremewan Ranch	(Nev) 9 39N 55E	5700	18E13M	Blue Mountain Summit	6 12S 36E	5098	17D2P	Aneroid Lake No.			
Fawn Creek	{ v) 4 33S 33E	7900	16G4MA	Triangle	(Ida) 25 7S 3W	5150	17E1MP	Dooley Mountain	32 11S 40E	5430	17D10a	Anthony Lake			
Fawn Creek	{ v) 8 30S 38E	4450	18G5a	Trout Creek	10 41S 38E	7800	18E20	Eldorado Pass	20 14S 38E	4600	18D9	Bald Mountain			
Fawn Creek	{ v) 33 46N 58E	6800	18G7a	"V" Lake	31 35½S 32½E	6600	18E8	Gold Center	21 9S 36E	5340	18D8P	Beaver Reservoir			
Fox Creek	{ v) 31 43N 54E	6700	16G12a	Vaught Ranch	(Ida) 10 11S 1W	5950	18E9P	Tipton	34 10S 35½E	5100	18D6P	County Line			
Fry Canyon	{ v) 31 45N 55E	6600	16G13a	War Eagle	(Ida) 20 5S 3W	7700					17D5	Lucky Strike			
Gadd Creek	{ v) 22 44N 39E	7800									17D13a	Meacham			
Gravelite Peak	{ Is) 31 8S 2W	5800									17D6M	Mirror Lake			
Hedge Pasture	{ Is) 18 42N 53E	6800									17D6T	Noss Spring			
Jack Creek, Lower	{ v) 9 42N 53E	7250	18E14	Barney Creek	16 14S 36E	5950	18E1P	Anthony Lake	18 7S 37E	7125	17D11a	Standley			
Jack Creek, Upper	{ v) 28 42N 53E	8420	18E16MP	Blue Mountain Springs	21 15S 35E	5900	18E33	Anthony Ski Hill	12 7S 36E	7800	17D7P	Taylor Green			
Jack Peak	{ v) 2 30S 46E	4390	18F6a	Buck Pasture	21 29S 35E	5700	18E5	Bourne	33 8S 37E	5800	17D3M	Tolligate			
Jordan Valley	{ Is) 20 45N 53E	6700	18E21a	Bully Creek	10 17S 37E	5300	17E1MP	Dooley Mountain	32 11S 40E	5430	17D16a	TV Ridge No. 2			
Laurel Draw	{ Is) 2 40S 47E	5650	18F7a	Call Meadows	29 20S 33E	5340	18E3	Eilerston Meadows	18 8S 38E	5400					
Lookout Butte	{ v) 27 40S 44E	6440	17F2a	Cottonwood-Indian	1D 19S 39E	4320	18E8	Gold Center	21 9S 36E	5340					
Lower Canyon	{ v) 16 44N 40E	6700	18E19M	Crane Prairie	24 16S 34E	5375	18E6A	Goodrich Lake	4 9S 38E	6775					
Marlitt Mountain	{ v) 10 46N 54E	7000	18F8a	Crow Camp	26 23S 34E	5500	18E29	Intake House	5 8S 38E	4930	17D1	Aneroid Lake No.			
Marlitt Mountain	{ v) 10 46N 54E	7000					17D12m	Ladd Summit	5 5S 39E	3730	17D2P	Aneroid Lake No.			
											17D14a	Big Sheep			

Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey

FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service
Department of National Defense
Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company
Portland General Electric Company
California-Pacific Utilities Company

MUNICIPALITIES

City of Baker
City of La Grande
City of The Dalles
City of Walla Walla

IRRIGATION DISTRICTS

Arnold Irrigation District
Associated Ditch Companies
Burnt River Irrigation District
Central Oregon Irrigation District
East Fork Irrigation District
Grants Pass Irrigation District
Hood River Irrigation District
Jordan Valley Irrigation District
Juniper Flat Irrigation District
Lakeview Water Users, Incorporated
Medford Irrigation District
Middle Fork Irrigation District
North Board of Control - Owyhee Project
North Unit Irrigation District
Ochoco Irrigation District
Rogue River Valley Irrigation District
South Board of Control - Owyhee Project
Squaw Creek Irrigation District
Talent Irrigation District
Tumalo Project
Vale-Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon

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CONSERVATION SERVICE
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LAND, OREGON 97205

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water supply for irrigation,
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supply, hydro-electric power
generation, navigation,
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